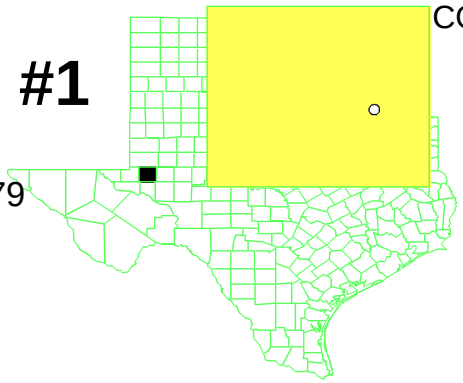
ODESSA CHROMIUM #1

TEXAS

EPA ID# TXD980867279



EPA REGION 6

CONGRESSIONAL DISTRICT 19

Ector County

Odessa

Updated: 08/09/99

Site Description

Location:
- The site is located in the vicinity of 44th St. and Brazos Ave., Odessa, Ector County, Texas.

Population:
- Approximately 3500 persons live outside the city limits within one mile of the site.

Setting:
- The nearest residence is within the site boundaries.
- The nearest drinking water well is also on-site.
- Approximately 200 water wells are within 1/2-mile of the site.
- A municipal water well is within 1,250 feet of the site.
- The sources of site contamination are within a 10-acre industrial area.

Hydrology:
- The estimated surface projection of the ground water plume is more than 20 acres.
- The Trinity-Edwards aquifer is sandstone and conglomerate rock, overlaid by 20 ft-60 ft. of soil and caliche (hard-pan).
- The aquifer itself is 60'-100' thick and underlaid by redbed clays.
- The depth to ground water at the site is 75 feet.

Wastes and Volumes

- The principal pollutant found during the Remedial Investigation is hexavalent chromium ranging to 72 parts per million (ppm) in ground water.
- The current volume of ground water treated is 151 million gallon as of 2/01/99.

Site Assessment and Ranking

NPL LISTING HISTORY

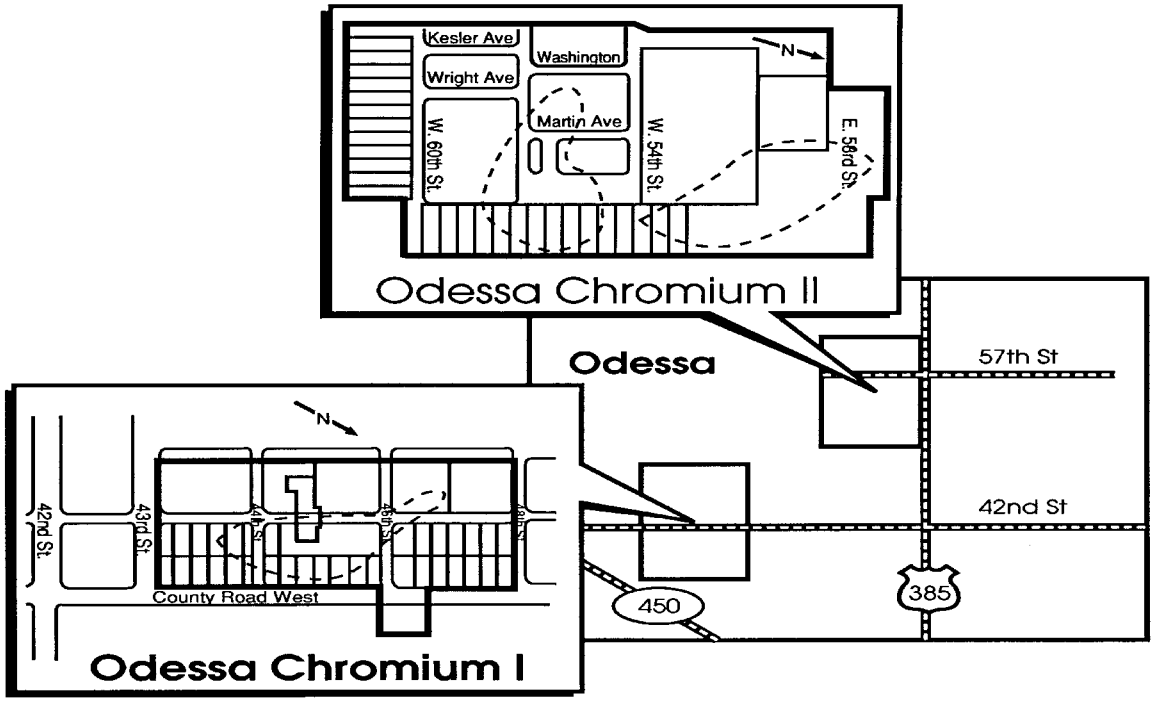
Site HRS Score: 42.24

Proposed Date: 10/15/84

Final Date: 5/20/86

NPL Update: No. 2

Site Map and Diagram



The Remediation Process

Site History:

! Contamination resulted from chrome plating operations from the late 1960s - 1970s.
! Site remediation has been addressed in two phases by the Texas Natural Resource Conservation Commission (formerly known as Texas Water Commission (TWC)).
! The first phase, or operable unit, dealt with development of an alternate water supply (AWS) for area residents and businesses.
! The second phase addressed the source and remediation of the chromium in the ground water.
! The Remedial Investigations and Feasibility Studies (RI/FS) for the two phases were completed in September 1986 (AWS) and March 1988 (Source/Ground Water).

Health Considerations:

! More than a 20-acre portion of the area's sole source aquifer (Trinity) is contaminated.
! Ground water contamination has been documented in 16 of 200 existing wells sampled.
! 5 of 14 monitoring wells contained detectable levels of chromium.
! The affected wells are outside of the city water supply service area.

Record of Decision

Signed: September 8, 1986 (Alternate Water Supply)
Signed: March 18, 1988 (Source Control/Ground Water

Alternate Water Supply Phase (AWS):

! For this phase, the Record of Decision (ROD) calls for an extension of the existing municipal water supply system to those persons residing within the impacted area.

Source Control/Ground Water:

! This ROD selected extraction and electrochemical treatment of contaminated ground water from the Trinity Aquifer.

Other Remedies Considered	Reason Not Chosen
----------Alternate Water Supply----------	
1. "No Action"	**Did not meet remedial objectives; not protective of human health and the environment**
2. Development of surface water supply	**High monthly water bills for users, Water Association must be formed**
3. Removal via treatment	**Stringent operational review required to ensure contaminants are properly removed**
4. Development of new well field	**Long term supply of water questionable**
----------Source Control/Ground Water----------	
1. "No Action"	**Did not meet remedial objectives; not protective of human health or the environment**
2. Containment Wall	**Difficult to implement; high cost to users**
3. Ion Exchange	**System will generate a hazardous sludge**
4. Chemical Treatment	**Treatment may increase TDS of ground water**

Community Involvement

! Community Involvement Plan: Developed 6/85, revised 9/89, and again in 12/92.
! Open houses and workshops: 4/86, 12/87, 9/89, 1/91
! Proposed Plan Fact Sheet and Public Meeting: 7/86 (AWS), 1/88 (Source/Ground Water)
! ROD Fact Sheet: 9/86 (AWS), 3/88 (Source/Ground Water)
! Milestone Fact Sheets: 1/85, 8/85, 12/87, 3/90, 9/90 (TWC), 12/90 (TWC), 1/91 (TWC), 2/94 (TWC)
! Citizens on mailing list: 33
! Constituency Interest: Low to moderate concerns regarding site after alternate water supply was brought on-line.
! Site Repository: Ector County Library, 321 West Fifth Street, Odessa, TX 79761; Permian Basin Regional Planning Commission, 2910 Laforce Blvd., Odessa, Tx.

Technical Assistance Grant

- Availability Notice: 4/11/89
- Letters of Intent Received: Gerald Fugit, Chrom Sites, Inc. - 12/20/90
- Draft Application Received: 4/10/91
- Grant Award: None - application denied
- Current Status: No TAG in process.

Contacts

- **Remedial Project Manager (EPA):** Ernest Franke, PE, RPLS, 214-665-8521, Mail Code: 6SF-AP
- **State Contact:** (TNRCC) James Sher, PE, 572/239-2444, Mail Code 143
- **Community Involvement Coordinator (EPA):** Olivia Balandrán 214-665-6584, Mail Code: 6SF-P
- **Attorney (EPA):** Anne Foster, 214-665-2169, Mail Code: 6SF-DL
- **State Coordinator (EPA):** Karen Bond , 214-665-6682, Mail Code: 6SF- AP
- **Prime Contractor:** Waste Abatement Technology, L.P.(WATEC)- pump and treat operations
- **Engineer:** IT Corp./Howell Eng.

Present Status and Issues

- The provision of an alternate water supply eliminated the potential for exposure to contaminants at the Odessa Chromium #1 site while final groundwater cleanup activities proceed.
- A ground water pump and treat system is operating to remove chromium contamination from the aquifer.
- A Explanation of Significant Differences for the Record of Decision (ESD) has been has been signed/approved by EPA on 10/25/99 to add Ferrous Sulfate in situ treatment to the ROD.

Benefits

- A safe alternate drinking water supply has been provided for approximately 3,500 people living in the site area.
- The remedy has treated over 152 million gallons of contaminated ground water from the only source aquifer in the Odessa area.